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MACSIGMA0 - SOFTWARE FOR SAR IMAGE DISPLAY AND ANALYSIS ON THE MACINTOSH

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ABSTRACT

Software developed at JPL for displaying calibrated SAR images and analyzing them on the Macintosh will be presented. The software will accept as input radar image data from the NASA/JPL multifrequency, polarimetric AIRSAR system, Magellan images of Venus, as well as ERS-1 and J-INS-1 low-resolution image data products generated by the Alaska SAR facility.

The software allows the user to display a radar image (in the case of polarimetric AIRSAR data the user can select a polarization for display). Pointing the mouse to any pixel, its location and radar cross section (RCS) arc displayed. 'l'he mouse can be used to draw polygons on the radar image and statistics for the radar data within the polygon are displayed in a separate window. These statistics can be saved to a separate file in a spreadsheet format for subsequent analysis. The software has a zoom capability and, at the highest zoom level, the user can display the RCS values on top of each pixel in the image. Displayed images can be printed as a half-tone, saved in a byte file, and saved in a PICT file. The byte file format is suitable for importing radar images into other image manipulation software packages. The PICT file format is used in many Macintosh applications; thus radar images can be easily imported into word processing or drawing programs.

The Macsigma0 software is intended for potential users of radar image data, who wish to quickly begin to understand the data and generate results, without investing a great deal of time in developing radar image display and analysis tools, It is hoped that the availability of easy to use software tools like Macsigma0 will encourage wider use of SAR data amongst applications scientists.

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Kewords: SAR Images, Display software